

Distribution of National Income

Pattern of Income Shares Since 1929

THIS review of income shifts since 1929 is devoted chiefly to the distribution of the national income, which measures the form in which earnings from current production are distributed before they are reduced by direct taxes or supplemented by transfer incomes. Some consideration is given towards the end of the article, however, to modifications brought about by direct taxes and transfer payments.

With total national income of record size, it is not surprising that, in dollar terms, all major income shares currently are high by historical standards. The compensation of employees, the income of business and professional proprietors, corporate earnings, and rental income reached peak levels in 1951. The income of farm proprietors had been exceeded only in 1948, and net interest, though below previous maxima, was at the highest point in 20 years.

Summary of changes

The relative positions of the different income shares have, however, changed markedly from those of 1929. In 1951 compensation of employees was 65 percent of the national income, a share larger by one-ninth than in 1929. The position of corporate earnings before tax, at more than 15 percent of the total, had increased, proportionately, even more—by three-tenths. Earnings of farm and nonfarm proprietors each comprised somewhat smaller percentages of national income in 1951 than in 1929, but they had exceeded 1929 as recently as 1948 and 1949, respectively. The major long-term losses in position occurred in rental income and net interest. Rental income had dropped in relative size from 6½ percent of the national income in 1929 to 3 percent in 1951, and net interest from 7½ to 2 percent.

These measurements, as already emphasized, are on a before-tax basis. Deduction of taxes, which will be considered later, makes a considerable difference in this pattern, especially with respect to the movement of corporate earnings which have been subjected to sharply increased tax rates.

Cyclically, the two shares representing business costs—compensation of employees and interest—have fluctuated less widely than total income so their percentages of the total have behaved counter-cyclically. The offset has been mainly in the violently fluctuating percentages for corporate earnings. However, the remaining three shares have shown moderately wider cyclical fluctuations than aggregate income.

In addition to such longer-term and cyclical movements, the percentages reflect strongly distortions caused by the war and such special occurrences as crop failures at home and abroad.

Distributional and structural changes

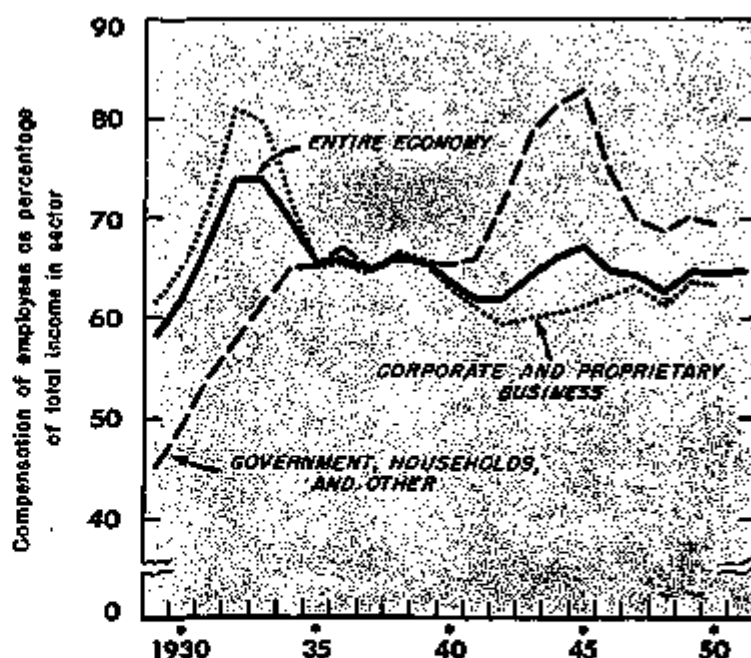
A major purpose of this article is to distinguish between two fundamentally different causes of shifting in the size of

the income shares. First, the relative size of the shares may change because of changes in the distribution of income within a homogeneous group of enterprises of the same legal form of organization, size-class, and industry. This type of change has real meaning only for ordinary business enterprises, defined here as proprietorships, partnerships, and corporations organized for profit. They have dominated cyclical swings in the distribution of national income.

Second, the over-all income distribution is greatly influenced by structural changes in the economy. Far the most important of these are shifts in the relative size of different industries or activities in which income is normally distributed differently.

Labor Share of Income

Ordinary business dominates cyclical movements but long-term trend is raised by government activity



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Such structural changes outside and, to a lesser extent, within the ordinary business system largely, though not entirely, account for the shifts in income distribution, other than those of a cyclical nature, which have taken place since 1929.

NOTE: MR. DENISON IS ASSISTANT DIRECTOR OF THE OFFICE OF BUSINESS ECONOMICS.

Compensation of employees

In which areas of the economy have the major changes in the ratio of the compensation of employees to national income occurred? Are they the result of real changes in the income distribution within homogeneous branches of the economy, or merely of shifts in the weights by which the various branches are combined?

To answer these questions ordinary business enterprises, within which originated 78 percent of the national income in 1929 and 80 percent in 1950, must first be distinguished from the heterogeneous activities making up the rest of the economy.

Long-time shift outside business sector

In 1950, the employee percentage of income originating within the ordinary business sector was 62.9 as against 61.7 in 1929. Outside the ordinary business sector, employee compensation comprised 70 percent of all income originating as contrasted with 45 percent in 1929. It is in the latter area, therefore, that an explanation must be sought for most of the 6½ percentage-point rise in the share of employees in the total national income.

This explanation lies in the enormous shift in importance among the various separate activities making up this heterogeneous fifth of the economy. There were sharp drops in the importance as income-creating sources (relative to total national income) of (1) individually-owned real property; (2) investments abroad; and (3) brokers' loans to individuals. Income flows deriving from these sources consist predominantly or entirely of rental income, interest, or profits. In contrast, compensation of Government and Government-enterprise employees, to which there is no property income counterpart, moved up from 5.9 percent of the national income to 9.8 percent.

The high labor proportion of national income during the war reflects entirely developments outside the ordinary business sector—chiefly the swelling of Government military and civilian payrolls.

Business dominates cyclical movements

Within the ordinary business system, the share of income accruing to labor has varied chiefly in response to cyclical influences, with no clear evidence of a long-term trend. It advanced sharply from 62 percent in 1929 to 81 percent in 1932, then fell back to 65 percent by 1935. At this point it was lower than in the period of corresponding activity in the preceding downswing. It did not recede further with continued business recovery in 1936 and 1937, but followed the business cycle thereafter until the outbreak of war.

Throughout the war period the percentage was slightly below the most prosperous peacetime years, but it had exceeded 1929 slightly by 1946, and thereafter stabilized except for a small dip in 1948. The extreme range of the percentage in highly prosperous years—1929, and all the years from 1941 through 1950—was from 59.5 in 1942 to 63.2 in 1947 and 1949. Excluding the war period, it was from 61.4 (in 1948) to 63.2—a variation of less than 2 percentage points or 3 percent.

Broad breakdown of ordinary business

These movements can be analyzed in more detail by subdividing the ordinary business economy. Data plotted in an accompanying chart permit the following observations:

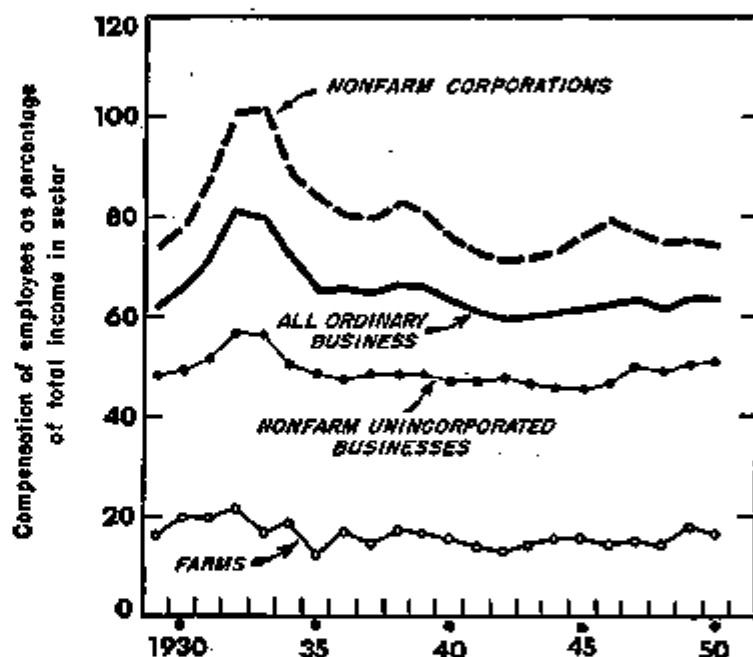
(1) In corporations and farms the employee share of income originating was the same in 1950 as in 1929. The slight increase in the labor share within ordinary business as a whole derived from a small advance within nonfarm pro-

prietorships and partnerships. So far as this breakdown is relevant, therefore, the conclusion drawn for ordinary business as a whole that 1929 and 1950 differed but little is based on a general situation rather than offsetting behavior among components or a change in the weights of the broad branches of the economy.

(2) In the prewar period, the employee percentages for nonfarm corporations follow a clearly defined cyclical pattern. Cyclical irregularities in this period derive from the other two components.

Importance of Labor Income by Sectors

Labor share varies widely among sectors of ordinary business



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(3) After 1941, the comparative stability of the employee percentage for all ordinary business is the result of offsetting movements for corporate and noncorporate firms and of shifts in their weights. From 1945 to 1947, when profits in some industries were depressed by reconversion, the labor percentage in the corporate sphere stood significantly above 1942-44 and 1948-50. In the nonfarm unincorporated sector, by contrast, the employee percentages were low in 1944 and 1945 and thereafter moved up as the corporate percentages receded. Noncorporate firms were of negligible importance in the industries affected by reconversion problems.

Industry shifts

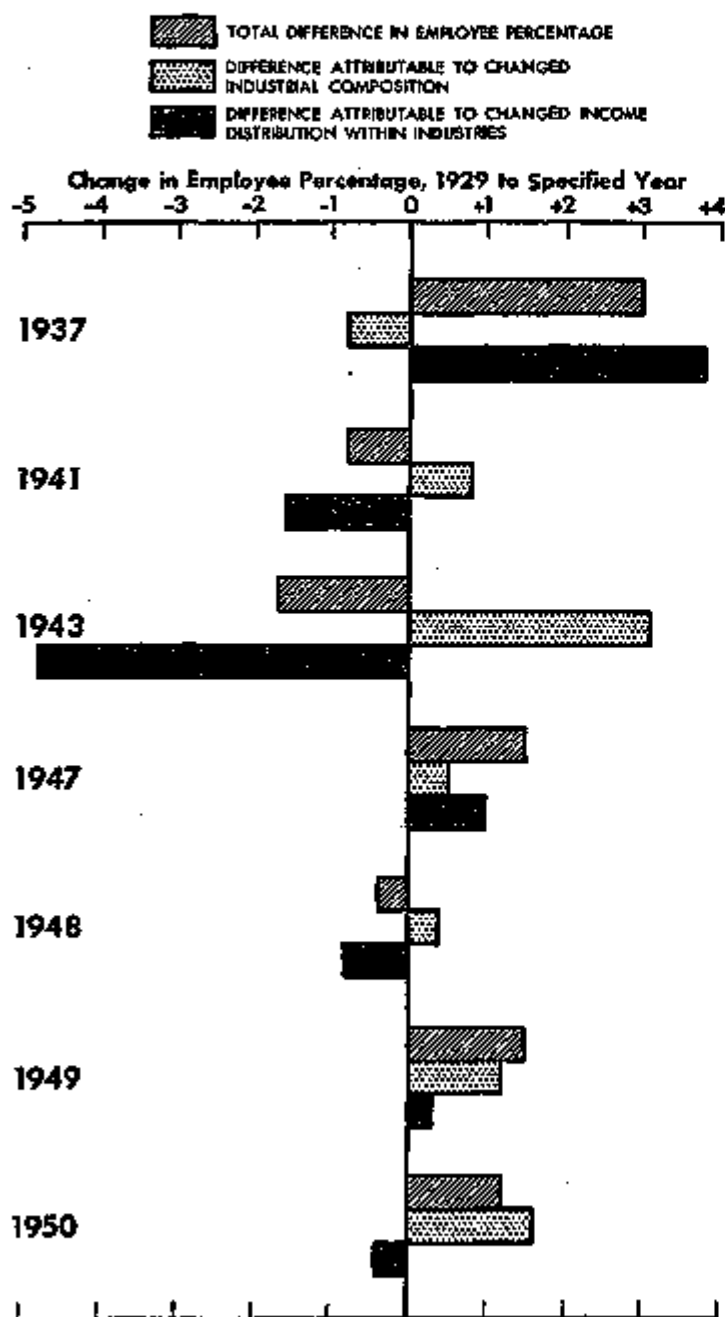
Employee percentages may also be calculated for individual industries within the ordinary business sector. They can then be utilized to segregate the effects upon the all-ordinary-business employee percentage of changes in the distribution of income within individual industries from the effects of shifts in the relative size of the industries. The results of such an investigation are summarized in the following

chart. Data plotted are averages of the results obtained by use of 1929 and of given-year weights.

This analysis leads to the following conclusions as to the causes of variation in the income share of employees within the ordinary business system:

(1) During the depression, the industrial distribution was less favorable to employees than in 1929 or other good years.

Factors Affecting Changes in Employee Share of Income in Ordinary Business



This can be seen to some extent from the 1937 data, but was far more pronounced in 1932, which is not shown on the chart.

(2) During the war, the industrial distribution was especially favorable to labor, while the income distribution within industries was even less favorable than the percentages based on combined data would suggest. To some extent this was already true by 1941. Analysis of individual-industry data shows the wartime shift toward a larger profits share to have occurred primarily in the nonwar rather than in the war-related industries.

(3) The small differences between the 1929 aggregate labor percentage and the percentages in the postwar years are largely attributable to industrial composition changes. In none of the 4 years from 1947 to 1950 can a difference from 1929 of as much as 1 percentage point be ascribed to income distribution changes within industries.

Employee share unchanged on comparable basis

Taken together, the foregoing analyses show rather conclusively that the marked increase from 1929 to 1950 in the employee share of total national income is entirely due to structural changes in the economy. The distribution of income within comparable parts of the economy was, on balance, about equally favorable to labor in 1929 and 1950.

There is a strong presumption from the preceding findings, taken together with the fact that in individual industries the proportion of total income which originated in corporations was apparently similar in 1929 and 1950, that this latter statement is also applicable to the corporate sector of the economy considered alone. This is confirmed more directly by a calculation for 1929 and 1950 similar to that shown in the chart but excluding farming and the professional service industries, which are dominated by noncorporate firms.¹

Net Interest

From \$6.5 billion in 1929, the interest component of national income dropped in every year but one until it reached a low of \$2.9 billion in 1946. It then recovered to \$5.4 billion in 1950 and \$5.7 billion in 1951.

From 1929 until 1932 the decline in interest payments, consisting mostly of fixed charges which could not readily be reduced, was less precipitate than that in other types of income; interest moved from 7.5 percent to 13.0 percent of aggregate income. Thereafter it dropped steadily to a low of 1.6 percent in 1946. The subsequent increase in payments brought this percentage back to 2.3 percent in 1949 and 1950, from which it receded a little in 1951.

Meaning of net interest

Net interest is intended, subject to a qualification in the next paragraph, to represent the monetary and imputed interest accruing to persons from private (nongovernmental) sources. It may also be viewed as approximately the sum of (1) monetary interest received by persons from private payors other than financial intermediaries; and (2) total monetary interest received by financial intermediaries in behalf of persons. This is true because interest receipts of financial intermediaries in excess of their monetary interest payments are offset in national income measurement by outpayments of imputed interest. The phrase "in behalf of persons" is

¹ Definitions adopted in measuring the national income affect the size of each share. This is notably true in regard to the line drawn between direct taxes, which are included in the national income, and indirect taxes, which are excluded. Exclusion of capital gains and losses and inventory profits and losses is also important. Such definitional matters have been fully discussed in the 1951 National Income Supplement to the Survey of Current Business. Income data utilized here are those published in that source and the May 1952 Survey of Current Business, together with underlying worksheet material, except for a preliminary adjustment of the 1948-51 corporate profits data to levels indicated by Bureau of Internal Revenue tabulations for 1949. Lack of detailed data for 1951 has necessitated using some of the charts and analyses with 1950.

That the employee share of the sharply reduced national income was high reflected entirely the reduction or disappearance of profits in almost every industry. Indeed, had it not been for the unfavorable industry distribution, the over-all labor proportion would have been even larger.

necessary because part of the interest received by financial intermediaries is balanced by monetary and, in the case of banks, imputed interest payments not to individuals but to other businesses.

An understatement of net interest in terms of this description results from the treatment of Government interest flows. To the extent that Government interest is received by corporations other than financial intermediaries, or is received by banks and balanced in national income accounting by imputed interest payments to businesses, it results in an understatement of net interest and a corresponding overstatement of business earnings from operations.

An estimate of the understatement resulting from this source, together with the net interest share after adjustment to include it, is presented for 3 years in the addendum to table 1. The share of interest in the national income would drop slightly more, in percentage points, from 1929 to 1950 if the adjusted figures were substituted for the unadjusted.

Decline in interest share general

The major sources of private interest are shown in table 1. Financial intermediaries are omitted because they do not originate interest. These data represent gross monetary interest payments and thus (even though some small flows have been omitted) exceed the adjusted net interest aggregate because some interest is paid to businesses other than financial intermediaries.²

These seven types of interest flows account for the major changes in adjusted net interest. They can be analyzed to discover the sources of the sharp relative decline in the interest share.

The total national income in 1946 (when interest was at its lowest point) was 2.1 times, and in 1950, 2.7 times, as large as in 1929. No major type of interest came close to keeping pace except, in the 1929-50 comparison, interest on consumer

Table 1.—Selected Types of Monetary Interest Payments
(Billions of dollars)

	1929	1946	1950
Monetary interest payments by type of debt:			
Mortgages on nonfarm dwellings.....	1.85	1.40	2.44
Farm mortgages.....	.36	.22	.20
Debt of transportation and utility corporations.....	1.45	.84	.66
Debt of other nonbanking corporations.....	2.28	1.12	1.74
Consumer credit.....	.44	.48	1.34
Loans from brokers.....	.95	.09	.06
Net inflow of interest from abroad.....	.38	.14	.21
Sum of selected types.....	8.14	4.23	7.07
Addendum:			
Net interest, as published.....	6.34	2.99	4.39
Adjustment for Government interest flows.....	.88	.84	.71
Net interest, adjusted.....	6.92	3.76	5.10
Index of adjusted net interest (1929=100).....	100	54	88
Index of sum of selected types of payments (1929=100).....	100	52	87

Source: U. S. Department of Commerce, Office of Business Economics.

credit. Special attention is drawn to the depressing effect of interest paid on brokers' loans, which amounted to nearly \$1 billion in 1929 and has been almost negligible thereafter. However, it is evident that the decline since 1929 in the importance of interest, relative to the national income, has been general throughout the economy.

The table also highlights the importance of interest payments on urban residential mortgages, and consumer credit in the partial recovery of interest after 1946. Each type had advanced approximately \$1 billion by 1950; together they

² Interest on brokers' loans is entirely paid by individuals to brokers. In the period when it was important, however, it was mostly passed on by the brokers to the banks, as the brokers were extending credit with borrowed funds. To avoid double-counting in the analysis, interest paid by noncorporate security and commodity brokers, although large, is omitted from table 1.

accounted for more than two-thirds of the total dollar increase. All other major private interest flows in 1950 remained below 1929 levels even in dollar terms.

Interest decline due mainly to debt

For interest to have maintained its former percentage of the national income it would have been necessary for both interest rates and the ratio of debt to national income to remain unchanged—unless changes in the two determinants were offsetting. In table 2 the changes in these two factors are isolated for each of the major types of private interest flows.

Table 2.—Analysis of Shifts in the Importance of Interest in the National Income, Major Private Interest Flows

Type of debt	(Indexes: 1929=100)								
	Interest rates			Ratio of debt to national income			Ratio of interest payments to national income		
	1929	1946	1950	1929	1946	1950	1929	1946	1950
Mortgages on nonfarm dwellings.....	100	78	78	100	47	64	100	37	48
Farm mortgages.....	100	76	78	100	24	22	100	18	17
Debt of transportation and utility corporations.....	100	78	87	100	38	38	100	28	24
Debt of other nonbanking corporations.....	100	33	35	100	44	51	100	24	28
Consumer credit.....	100	104	113	100	52	107	100	54	121
Loans from brokers.....	100	33	38	100	4	5	100	1	2
Weighted (1929 weights) indexes, 8 debt components.....	100	66	65	100	38	48	100	28	28

¹ See footnote 2 to the text.

² Index of the actual ratio of interest payments to national income, based on combined debt and interest data for the 8 series. Computed as the product of the indexes for (1) the ratio of debt to national income and (2) interest rates, the weighted indexes would be 25 in 1946 and 30 in 1950.

Source: U. S. Department of Commerce, Office of Business Economics.

Had the ratio of debt of each type to national income been the same in 1946 as in 1929, interest rate changes would have reduced by 34 percent the ratio of these types of interest to the national income. Had interest rates of each type remained unchanged, the behavior of debt alone would have reduced by 62 percent the ratio of these types of interest to the national income.

This ratio actually fell by almost three-fourths from 1929 to 1946 under the combined influence of the two factors. The analysis suggests that about two-thirds of this decline should be ascribed to the fact that debt did not increase so much as national income and about one-third to lowered interest rates.

Interest rates, properly weighted for this purpose, showed little change from 1946 to 1950; the rise in the interest share of the national income was entirely due to the advance in debt—particularly urban mortgages and consumer credit.³

Interest from abroad smaller

The foreign balance adjustment was omitted from table 2 in order to confine it to interest paid in the United States. The return on private portfolio investments by Americans was about 6 percent in 1929 and 3 percent in 1950. This reduction in rate of return was less important than the behavior of the amount of such investments in causing the proportion of national income represented by interest from abroad to dwindle.

³ In table 2 the effort was made in each case to confine the debt data utilized to interest-bearing types. In the case of corporations, however, it was necessary to include accounts payable. Changes in the composition of interest-bearing consumer debt cause the interest rate index in both 1946 and 1950 to exceed 100, although rates on individual types of debt had declined somewhat. Compositional shifts may also affect the corporate indexes, although on an over-all basis the percentage breakdown between long-term and short-term debt was similar in the 3 years shown.

Business Earnings

All business earnings arise in the ordinary business sector except the net inflow of dividends and branch profits from abroad, and the refunds and dividends of farmers' cooperatives.⁴ With these exceptions, the percentage of the total national income comprised by each type of business income—the income of farm proprietors, the income of business and professional proprietorships and partnerships, and corporate profits before tax, each measured so as to exclude inventory profits and losses—depends in the first instance upon (1) the importance of the sector in which it originates and (2) the ratio of business income to total income within the relevant sector. The two influences are isolated for 1929 and 1950 in table 3.

Changes in the importance of the sectors reflect almost entirely the shifting industrial composition of the national income. They tended to boost the shares of corporate earnings and nonfarm proprietors in the total national income, while lowering the share of farm proprietors.

Table 3.—Analysis of the Ratio of Business Earnings to National Income, by Types

	1929	1950
Ratio of business earnings to total national income:		
Farms.....	0.063	0.058
Nonfarm proprietorships and partnerships ¹.....	.084	.083
Nonfarm corporations ².....	.115	.140
Ratio of income originating in sector to total national income:		
Farms.....	.089	.072
Nonfarm proprietorships and partnerships.....	.178	.190
Nonfarm corporations.....	.215	.248
Ratio of business earnings to total income originating in sector:		
Farms.....	.720	.808
Nonfarm proprietorships and partnerships.....	.597	.439
Nonfarm corporations.....	.523	.256

¹ Excludes income of cooperatives.

² Excludes the net inflow of dividends and branch profits from abroad.

Source: Office of Business Economics, U. S. Department of Commerce.

Particular interest centers in the second factor, the ratio of business income to total income in each sector. For each of the three business sectors, the ratio of business earnings, and of business earnings plus net interest, to total income is shown in the accompanying chart. The latter percentage falls short of 100 by the share of employees, the only other type of income which originates in ordinary business.

Farms

The most striking development in the distribution of income within the farm sector is the long-term shift from interest to proprietors' income. In 1929 interest accounted for 11 percent and farm operators' net income for 73 percent of income originating in agriculture; in 1950 these proportions were 3 and 81. This shift, which had been largely completed by 1942, was partly due to a reduction of more than one-fifth in mortgage interest rates, but primarily to the drop in the ratio of debt to income.

There is no ascertainable trend in the proportion of farm national income going to interest recipients and proprietors combined. However, this proportion tends to be high when income is rising and low when it is falling because of the greater short-run stability of farm wages.

Aided by this tendency, the long-term shift from interest to proprietors' income permitted a percentage share of total national income for farm proprietors in 1951 only one-twentieth under 1929, despite the fact that the proportion

of national income which originated in agriculture was smaller by one-seventh. This 1951 distribution was somewhat more favorable to farmers than that for 1950, which is shown in table 3. It should be noted that it is only in the past 3 years that farm earnings have fallen short of their 1929 percentage of the total national income. With farm prices especially favorable, they were above their 1929 proportion in all but one year from 1941 through 1948.

Nonfarm proprietors' income

The ratio of proprietors' earnings to income originating in nonfarm proprietorships and partnerships was almost 4 points lower in 1950 than in 1929. Most of this difference can be traced to the professional services. In this area there was a marked increase in the number of employees per proprietor (partly due to compositional changes, though the tendency was general) and a corresponding rise in the ratio of pay rolls to proprietors' income. In addition, a decline in the relative importance of the professions within the nonfarm proprietorship and partnership total contributed to the over-all decline, since in both years proprietors' income was a much higher percentage of total income originating in the professions than in the remainder of the noncorporate economy.

Another industry in which change away from proprietors' earnings was marked is security and commodity brokerage. Here, the switch was between proprietors' income and net interest—which was substantially negative in 1929.

In the remainder of the noncorporate economy there was, in the aggregate, no difference between the proprietors' share of total income in 1929 and 1950. This does not, of course, preclude offsetting changes among individual industries, nor does it take account of an apparent reduction in the proprietors' share in 1951.

Particularly noteworthy is the bulge which appeared in the proprietors' share of noncorporate business income during and just after World War II. Small firms, particularly unincorporated manufacturing and trade establishments, enjoyed exceptionally favorable profits during the period of shortages and controls.

Corporate earnings

The principal change in the distribution of income within nonfarm corporations has been the same as that in agriculture: an increase in corporate earnings at the expense of interest.⁵ In the 1948-51 period corporate earnings, computed in the national income on a before-tax basis, averaged about 25½ percent of income originating in corporate business, as compared with 22.3 percent in 1929. Net interest dropped from 3.6 percent in 1929 to about 0.5 percent in the postwar period, while the compensation of employees' percentage remained about the same.

Factors in higher profit proportion

Previous analysis indicates that the rise in the profits share was not the result of a different industrial distribution. Two of the major developments which may have contributed to the higher profit proportion may be mentioned, however.

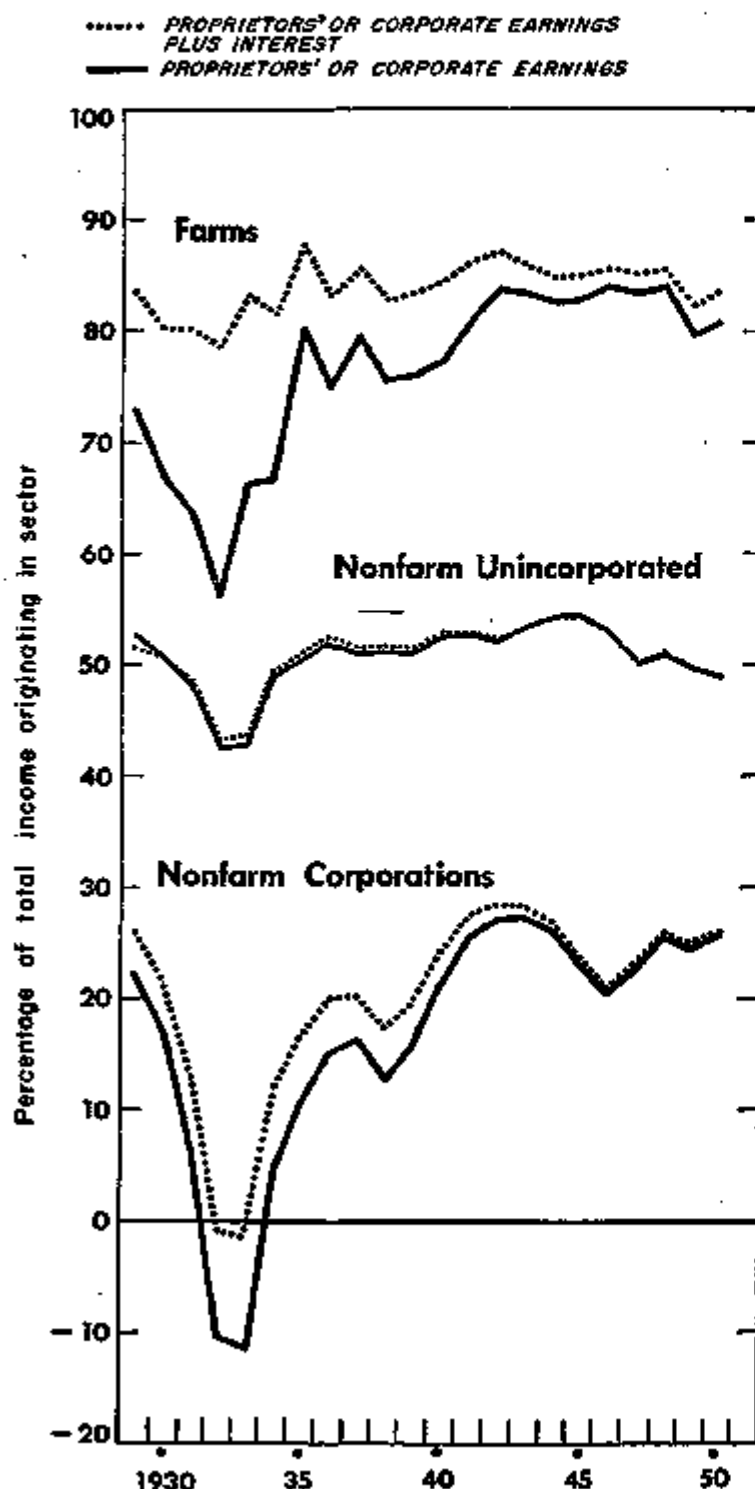
One is the advance in price levels which has raised replacement costs of capital goods above their average original cost. Adjustment of both 1929 and 1950 capital consumption charges to a replacement-cost basis would cut the increase in the profits proportion of income originating in corporate

⁴ It has been correctly pointed out that in national income accounting the existence of intercorporate dividend and interest flows introduces an essentially arbitrary element into the breakdown between the interest and profit shares within the corporate sector. However, in the period under consideration there was no great change in the relationship between interest receipts and interest payments of nonbanking corporations. The drop in the interest share was due to the decline in interest payments, so that the distinction emphasized in the text appears warranted.

⁵ The net inflow from abroad amounted to 0.1 percent of the national income in 1929 and 0.3 percent in 1950; to this extent it contributed to the rise in the ratio of total corporate profits to national income. Refunds and dividends of farmers' cooperatives equaled less than 0.1 percent of national income in both years.

business by an estimated 1 to 1½ percentage points. However, it is sometimes contended that improvements in the efficiency of plant and equipment and their utilization have largely or entirely offset the nominal price advances, and that such an adjustment is not a proper one.

Business Earnings and Net Interest as percentage of total income by sectors



The second major development is the growth of corporate income and excess profits taxes. Over a period of more than two decades some shifting of this tax may have occurred and contributed to the advance in the profits share on a before-tax basis. The results on an after-tax basis are discussed in the final portion of this analysis.

Profits movement within the period

In the prewar period the ratio of corporate earnings to income originating in nonfarm corporations followed the business cycle closely and regularly. The variation was extreme, from 22.3 percent in 1929 down to minus 11.4 percent in 1933—a swing of 33 percentage points—and back to 16.2 percent with the partial business recovery achieved by 1937. By 1941 it had reached 25.5 percent—equal to its 1948-51 level—and moved a little higher in the early war years.

The reconversion process from 1945 to 1947 had a much more pronounced effect upon profits than on most economic indexes, as the earnings percentage dipped to a low of 20.4 in 1946. The decline in earnings was confined to the metal-manufacturing industries, transportation, and some types of mining.

From 1948 through 1951, despite the sharp changes which occurred in prices, wage rates, tax rates, and the composition of demand for business products, there was little variation in the corporate earnings percentage. Certainly, changes were no greater than could be explained by fluctuations in the rate of economic activity.

Rental Income of Person

Rental income, which amounted to more than 6 percent of the national income in 1929, fell somewhat more than the total in the downswing of the great depression. It failed to exhibit a proportional recovery in the upward phase of the cycle, however, and by 1942 was below 4 percent of total income. In 1950 this percentage was down to 3.4 and in 1951, to 3.0.

Character of rental income

Rental income of persons measures the net earnings of persons from their holdings of real property, including the imputed net rent credited to owner-occupants of nonfarm homes. It also includes a relatively small amount of royalties received by persons from patents, copyrights, and rights to natural resources.

Rental income resembles proprietors' income in that it is a residual share computed by deducting costs from value of product and also in that it represents a composite of what are analytically labor, interest, and profit components. The labor-return ingredient in rent, however, may be presumed to be relatively small, since by definition only incidental labor services are involved; the interest component is probably predominant.

Lag in rental rates and gross rents

As a proportion of the national income, monetary rental income (as distinguished from imputed rent on owner-occupied homes) declined a little less than one-fourth from 1929 to 1950, about equal to the reduction in interest rates on urban mortgages. The movements of monetary rental income from each of the major types of property holdings have been quite similar.

Whether or not it was as the consequence of lower interest rates, rent control, or other causes, the principal immediate reason for the long-term relative decline of rental income was apparently the fall in rental rates relative to general prices. While rental-rate data for nonresidential properties

are extremely sparse, such information is available for rented residential property, which alone is responsible for two-fifths or more of monetary rental income. They show that the ratio of the Bureau of Labor Statistics' urban residential rent index to its general consumers' price index dropped by one-third from 1929 to 1950 or to early 1952.

Primarily as a result of such differential price movements, the ratio of gross monetary rents received by persons to national income fell by more than two-fifths. Persons received about the same proportion of total rent payments in the 2 years, so a change of this kind was not a factor in the relative decline. The shift from tenant to owner-occupancy of homes which occurred contributed to a fairly small extent,

fell by more than one-half. The pattern of change, moreover, was quite different from that of monetary rents. Aided by the substantial shift from tenant to owner-occupancy, the 1929-50 percentage increase in actual expenses (including depreciation) of owner-occupants was quite as large as that in the national income, but the increase in gross rents, which are valued by reference to rental rates on rented dwellings, was much smaller. In consequence, the ratio of net rental income to gross rental values fell by two-fifths.

It should not be overlooked that the rental data are much influenced by the method of calculating depreciation and also by the existence of residential rent controls.

Transfer Incomes and After-Tax Distribution

The distribution of earned income which has been discussed thus far is altered significantly when account is taken of the receipt of transfer incomes and the payment of taxes on income. The effects of these transactions upon longer-run changes in the share distribution of income are examined in this section.

The emphasis here is upon types of income flows rather than upon changes in the welfare of particular groups in the community. There is no appraisal of the total burden of taxes as indirect taxes and even direct taxes not levied upon earned or transfer incomes are outside the scope of the present analysis. Moreover, consideration is not given to the benefits derived from Government expenditures other than money transfer payments.

Private income before and after tax

In table 4, transfer incomes are added to 1929 and 1948 national income to secure total private incomes before taxes. Taxes allocable to particular types of income (including social insurance contributions) are then deducted from this aggregate to secure private income after such taxes. The tax

Table 5.—Distribution of Income by Three Income Concepts, 1929 and 1948

Type of income	National income			Private income before taxes			Private income after allocable taxes on income		
	1929	1948	Index of percent	1929	1948	Index of percent	1929	1948	Index of percent
	Percent			Percent			Percent		
Compensation of employees.....	58.1	62.7	108	57.6	61.9	108	58.7	64.8	111
Income of unincorporated enterprises and inventory valuation adjustment:									
Business and professional.....	9.5	9.9	104	9.3	9.6	103	9.4	9.8	104
Farm.....	0.5	7.9	123	6.4	7.7	120	6.6	8.7	133
Rental income of persons.....	0.7	3.4	51	6.6	3.3	50	6.7	3.6	54
Corporate profits and inventory valuation adjustment.....	11.8	14.2	121	11.6	13.8	119	10.9	8.7	87
Interest.....	7.6	1.9	25	8.5	3.8	45	8.8	4.3	50
Total excluding unallocated transfer incomes.....	100.0	100.0	100	100.0	100.0	100	100.0	100.0	100

NOTE.—Percentages and indexes calculated from unrounded data. Detail will not necessarily add to total because of rounding.

SOURCE: U. S. Department of Commerce, Office of Business Economics.

data represent tax liability on income earned or received during the period, rather than actual payments.

Some transfers and taxes can be related in total to a particular income share. With one exception, social insur-

Table 4.—Derivation of Private Income Before and After Liability for Allocable Taxes on Income, 1929 and 1948

(Billions of dollars)						
Year and type of income	National income	Add: transfer incomes	Equals: private income before tax	Less: corporate profits taxes and social insurance contributions	Less: personal income taxes	Equals: private income after allocable taxes on income
1929						
Compensation of employees.....	50.9	0.1	50.9	0.2	0.1	50.6
Income of unincorporated enterprises and inventory valuation adjustment:						
Business and professional....	8.3	.....	8.3	.....	.1	8.1
Farm.....	5.7	.....	5.7	.....	.0	5.7
Rental income of persons.....	5.8	.....	5.8	.....	.0	5.8
Corporate profits and inventory valuation adjustment.....	10.3	.....	10.3	1.4	.8	8.6
Interest.....	6.5	1.6	7.6	.....	.2	7.4
Total excluding unallocated transfer incomes.....	87.4	1.1	88.4	1.6	.7	86.2
Unallocated transfer incomes.....	.....	1.4	1.4	.1	.....	1.3
Total including unallocated transfer incomes.....	.....	2.5	90.8	1.6	1.7	87.5
1948						
Compensation of employees.....	149.2	2.2	142.4	4.7	10.1	127.6
Income of unincorporated enterprises and inventory valuation adjustment:						
Business and professional....	32.1	.....	32.1	.....	3.8	19.3
Farm.....	17.7	.....	17.7	.....	.5	17.1
Rental income of persons.....	7.6	.....	7.6	.....	.4	7.1
Corporate profits and inventory valuation adjustment.....	31.7	.....	31.7	18.0	1.6	17.1
Interest.....	4.3	4.6	8.9	.....	.9	8.8
Total excluding unallocated transfer incomes.....	222.5	6.7	229.1	17.7	14.7	206.7
Unallocated transfer incomes.....	.....	9.1	9.1	.5	.....	8.6
Total including unallocated transfer incomes.....	.....	15.7	238.2	18.2	15.7	205.3

Excludes taxes assigned to capital gains and losses, transfers among individuals, etc.

NOTE.—Detail will not necessarily add to total because of rounding.
SOURCE: U. S. Department of Commerce, Office of Business Economics.

The influence of lagging gross rental receipts upon rental income was partially offset by an increased ratio of net rent to gross rent, so that rental income from rented property more nearly kept pace with the advance in total income. This pattern of lagging gross rental receipts and higher net-gross ratios applied to farm property, tenant-occupied residential property, and commercial and industrial property alike.

Imputed rent

Imputed rent made a poorer showing than monetary rental income from 1929 to 1950. It increased dollarwise by less than one-fourth and, as a proportion of the national income,

ance contributions and benefit payments are assigned to labor income, since in the years concerned the plans were related to wage and salary earnings. Left unallocated are contributions to and benefit payments from Government life insurance, as well as all transfer payments other than social insurance benefits, which consist largely of payments to veterans and their dependents and to persons without other sources of income. Net Government interest payments are combined with private interest. Corporate profits tax is assigned to corporate earnings.

Because of exemptions and progressive rates, allocation of personal income taxes is possible only if one basic condition is accepted: that for each taxpayer it is permissible to allocate his income tax liability among various types of income in proportion to his reported receipts of taxable income. Tabulations of the Bureau of Internal Revenue published in *Statistics of Income* furnish tax and income data classified by highly detailed income-size classes, so that a procedure can be followed which allocates personal income taxes in close correspondence to this condition. The most recent year for which such data are available, however, is 1948.⁶

Differential impact of taxes

The ratio of personal income tax to income varies widely among the different income shares for three major reasons. First, definitions of taxable income differ from the definitions followed in national income estimation; the inclusion in the latter of imputed incomes and differences in accounting for business inventories, in particular, should be recalled. Second, the importance of tax evasion and avoidance varies as among different types of income. Third, the distribution of income among income-size classes, which are subject to different tax rates, varies.

These differences, together with the imposition of corporate income taxes and collection of social insurance contributions resulted in 1948 in a ratio of allocable taxes to private income before taxes of 3 to 5 percent each for farm proprietors'

income, interest, and rental income; 10½ percent for labor income; 12½ percent for the income of business and professional proprietors; and 46 percent for corporate earnings. The rate for labor income, it should be noted, includes social insurance contributions with which are associated present and future benefit payments. In 1929, of course, tax rates were much lower on all types of income.

Percentage distributions of national income and of private income before and after allocable taxes (exclusive of unallocated transfer payments) are presented in table 5 for 1929 and 1948. Since substantial shifts both in the distribution of national income and in tax rates have taken place since 1948, the emphasis here is less upon the changes in the distributions as such than upon the way in which high postwar transfers and taxes have caused the long-term shifts on the three bases to differ.

These differences may be presumed to have persisted to the present, although in even more pronounced form since current tax rates are higher than those prevailing in 1948. In 1951, it may be noted, the ratio of corporate profits tax liability to corporate earnings was 0.58 as against 0.41 in 1948; the ratio of declared Federal personal income tax liability to personal income was up from 0.075 to 0.096; and pay-roll tax rates were also higher.

Taxes heaviest on corporate earnings

The most striking point shown by table 5 is not a surprising one: that corporate earnings have increased at a larger rate than total income on a before-tax basis, but at a smaller rate when both are measured after taxes. While the share of corporate earnings in the national income increased by 21 percent, on a private income-after-tax basis it declined by 13 percent.

Inclusion of Government interest, which advanced sharply in this period, together with the low effective tax rate against interest, limited the decline in the interest share of private income after tax to one-half, as against a decline of three-fourths in the interest share of national income.

The performance of business and professional proprietors' income was the same on either basis, while all other shares did better on the basis of private income after taxes.

A comparison of the distributions of private income before and after allocable taxes, to narrow the difference to tax effects, shows the after-tax distribution to be the more favorable to all shares except corporate earnings, with respect both to level and 1929-48 movement. In the case of the income of business and professional proprietors, however, the difference was slight.

⁶ Several comments about the distribution of personal income taxes are required: (1) Some estimation is required to bring *Statistics of Income* categories of income into accordance with those used here, but the possible error is not such as appreciably to affect the after-tax data. (2) The amount of tax allocable to net capital gains is omitted from the table; in 1929 this was a very high proportion of all personal income taxes. (A similar deduction from corporate profits tax liability was not made. If made, it would reduce this tax by about \$0.1 billion in 1929 and \$0.4 billion in 1948, amounts insufficient to alter the analysis appreciably.) Also excluded are minor amounts of tax on transfers of income, among individuals (e. g., alimony payments) and on transfer payments. The totals shown in table 5 therefore fall short of total personal income tax liability. (3) Taxes on taxable fiduciaries, and the personal income tax initially allocable to income from fiduciaries, are assigned to shares in accordance with the (partially estimated) income of the fiduciary. (4) Additional Federal tax liability arising through audit or amendment of returns is omitted. (5) In 1929, normal tax and surtax were separately distributed; the separate tax on long-term capital gains was omitted. (6) State personal income taxes, which are relatively small, were distributed like Federal taxes.

National Income

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